

ANALYTICAL REPORT

City of Terrace
5003 Graham Avenue
Terrace, BC V8G 1B3
rhoekstra@terrace.ca

Work Order: N23L043

RECEIVED: 07-Dec-2023

Project: Frank Street Wells
Project Number: -
Project Manager: Robert Hoekstra

REPORTED: 01-Jan-2024

All analyses were performed in accordance with standard procedures published by BC MoE, Health Canada, Environment Canada, the American Public Health Association, or the US EPA.

Northern Laboratories (2010) Ltd.



Jesse Newton
Laboratory Manager

ANALYTICAL REPORT

City of Terrace - Frank Street Wells

Work Order: N23L043

LAB #	N23L043-01	N23L043-02	N23L043-03
SAMPLED DATE	06-Dec-23	06-Dec-23	06-Dec-23
SAMPLED TIME	10:10	11:00	11:40
SAMPLE ID	Well #3	Well #2	Well #1

	MRL Units	CDWG			
General Parameters (Water)					
pH	1.0 pH units	7.0-10.5	7.3	7.0	7.2
Alkalinity (total, as CaCO3)	1 mg/L	-	180	160	170
Conductivity	1.0 uS/cm	-	481	449	478
Colour	1 PtCo units	AO <= 15	3	3	1
Turbidity	0.05 NTU	OG < 1	0.28	0.21	0.19
Solids, Total Dissolved / TDS	1.0 mg/L	AO <= 500	300	280	300
Cyanide, Total	0.0020 mg/L	MAC = 0.2	<0.0020 [1]	<0.0020 [1]	<0.0020 [1]
Phosphorus (total)	0.05 mg/L	-	<0.10	<0.10	<0.10

Calculated Parameters (Water)					
Nitrate (as N)	0.10 mg/L	MAC = 10	0.44		0.40
Nitrate (as N)	0.40 mg/L	MAC = 10		0.56	
Hardness, Total (as CaCO3)	0.500 mg/L	-	224	184	199

Anions (Water)					
Chloride	1.0 mg/L	AO <= 250	40.3	40.9	42.2
Fluoride	0.05 mg/L	MAC = 1.5	<0.10	<0.10	<0.10
Nitrite (as N)	0.01 mg/L	MAC = 1	<0.01	<0.01	<0.01
Nitrate + Nitrite (as N)	0.10 mg/L	MAC = 10	0.44	0.56	0.40
Sulfate	1.0 mg/L	AO <= 500	14.9	12.4	13.6

BCMOE Aggregate Hydrocarbons (Water)					
VHw (6-10)	100 ug/L	-	<100	<100	<100
VPHw	100 ug/L	-	<100	<100	<100

Total Metals (Water)					
Aluminum, total	0.0050 mg/L	OG < 0.1	0.0078	0.0083	<0.0050
Antimony, total	0.00020 mg/L	MAC = 0.006	<0.00020	<0.00020	<0.00020
Arsenic, total	0.00050 mg/L	MAC = 0.01	0.00062	<0.00050	<0.00050
Barium, total	0.0050 mg/L	MAC = 1	0.122	0.0871	0.109
Beryllium, total	0.00010 mg/L	-	<0.00010	<0.00010	<0.00010
Bismuth, total	0.00010 mg/L	-	<0.00010	<0.00010	<0.00010
Boron, total	0.0500 mg/L	MAC = 5	<0.0500	<0.0500	<0.0500
Cadmium, total	0.000010 mg/L	MAC = 0.005	0.000183	0.000022	<0.000010
Calcium, total	0.20 mg/L	-	77.9	62.4	67.8

ANALYTICAL REPORT

City of Terrace - Frank Street Wells

Work Order: N23L043

LAB #			N23L043-01	N23L043-02	N23L043-03
SAMPLED DATE			06-Dec-23	06-Dec-23	06-Dec-23
SAMPLED TIME			10:10	11:00	11:40
SAMPLE ID			Well #3	Well #2	Well #1
	MRL Units	CDWG			
Total Metals (continued)					
Chromium, total	0.00050 mg/L	MAC = 0.05	<0.00050	<0.00050	<0.00050
Cobalt, total	0.00010 mg/L	-	<0.00010	<0.00010	<0.00010
Copper, total	0.00040 mg/L	AO = 1 MAC = 2	0.0793	0.0120	0.00290
Iron, total	0.010 mg/L	AO <= 0.3	0.030	<0.010	<0.010
Lead, total	0.00020 mg/L	MAC = 0.005	0.00447	0.00030	<0.00020
Lithium, total	0.00010 mg/L	-	0.00202	0.00169	0.00204
Magnesium, total	0.010 mg/L	-	7.08	6.78	7.08
Manganese, total	0.00020 mg/L	AO <= 0.02 MAC = 0.12	0.00786	0.00103	0.00026
Mercury, total	0.000010 mg/L	MAC = 0.001	<0.000010	<0.000010	<0.000010
Molybdenum, total	0.00010 mg/L	-	0.00058	0.00040	0.00045
Nickel, total	0.00040 mg/L	-	0.00350	<0.00040	<0.00040
Phosphorus, total	0.050 mg/L	-	<0.050	<0.050	<0.050
Potassium, total	0.10 mg/L	-	2.27	2.06	2.30
Selenium, total	0.00050 mg/L	MAC = 0.05	<0.00050	<0.00050	<0.00050
Silicon, total	1.0 mg/L	-	6.4	6.6	6.4
Silver, total	0.000050 mg/L	-	<0.000050	<0.000050	<0.000050
Sodium, total	0.10 mg/L	AO <= 200	14.5	16.2	16.0
Strontium, total	0.0010 mg/L	MAC = 7	0.239	0.207	0.223
Sulfur, total	3.0 mg/L	-	5.6	4.5	5.0
Tellurium, total	0.00050 mg/L	-	<0.00050	<0.00050	<0.00050
Thallium, total	0.000020 mg/L	-	<0.000020	<0.000020	<0.000020
Thorium, total	0.00010 mg/L	-	<0.00010	<0.00010	<0.00010
Tin, total	0.00020 mg/L	-	0.00045	<0.00020	<0.00020
Titanium, total	0.0050 mg/L	-	<0.0050	<0.0050	<0.0050
Tungsten, total	0.0010 mg/L	-	<0.0010	<0.0010	<0.0010
Uranium, total	0.000020 mg/L	MAC = 0.02	0.000382	0.000265	0.000306
Vanadium, total	0.0050 mg/L	-	<0.0050	<0.0050	<0.0050
Zinc, total	0.0040 mg/L	AO <= 5	0.137	0.0086	<0.0040
Zirconium, total	0.00010 mg/L	-	<0.00010	<0.00010	<0.00010

Volatile Organic Compounds (VOC) (Water)

Benzene	0.5 ug/L	MAC = 5	<0.5	<0.5	<0.5
Ethylbenzene	1.0 ug/L	AO = 1.6 MAC = 140	<1.0	<1.0	<1.0

ANALYTICAL REPORT

City of Terrace - Frank Street Wells

Work Order: N23L043

LAB #	N23L043-01	N23L043-02	N23L043-03
SAMPLED DATE	06-Dec-23	06-Dec-23	06-Dec-23
SAMPLED TIME	10:10	11:00	11:40
SAMPLE ID	Well #3	Well #2	Well #1
	MRL Units	CDWG	

Volatile Organic Compounds (VOC) (continued)

Methyl tert-butyl ether	1.0 ug/L	AO <= 15	<1.0	<1.0	<1.0
Styrene	1.0 ug/L	-	<1.0	<1.0	<1.0
Toluene	1.0 ug/L	AO = 24 MAC = 60	<1.0	<1.0	<1.0
Xylenes (total)	2.0 ug/L	AO = 20 MAC = 90	<2.0	<2.0	<2.0
Toluene-d8	70-130 [surr]	-	92%	99%	95%
4-Bromofluorobenzene	70-130 [surr]	-	75%	79%	70%

ANALYTICAL REPORT

City of Terrace - Frank Street Wells

Work Order: N23L043

Special Notes

1 = The sample was prepared and/or analyzed past the recommended holding time.

Glossary of Terms

MRL	Method Reporting Limit
<	Less than the reported detection limit (RDL)
mg/L	Milligrams per Litre
NTU	Nephelometric Turbidity Units
pH units	pH units
PtCo units	Platinum Colbalt colour units
ug/L	Micrograms per Litre
uS/cm	Micro Siemens per centimeter
MAC	Maximum Acceptable Concentration. Values above MAC are formatted with red text and solid outline.
AO	Aesthetic Objective (not health related). Values above AO are formatted with a dashed outline.
OG	Operational guideline (for treated water)

Standards / Guidelines Referenced

CDWG	Canadian Drinking Water Quality Guidelines (2019) https://www.canada.ca/content/dam/hc-sc/migration/hc-sc/ewh-semt/alt_formats/pdf/pubs/water-eau/sum_guide-res_recom/sum_guide-res_recom-eng.pdf
-------------	--